

DIABROTICA IN NEW MEXICO.

The Table of the distribution of *Diabrotica* given by Prof. Webster on p. 67 has gone wrong either in copying or printing. The altitude of the Mesilla Valley is 3800 ft. *D. tricineta* was not taken at Juarez, but in the Mesilla Valley; Mr. Wickham says it is also found in Northern Arizona, and at Albuquerque, N. M. *D. longicornis* (not *lemniscata*) was found by Mr. Wickham, at Albuquerque. *D. lem-niscata* is from Socorro (Snow). T. D. A. COCKERELL.

NOTE ON SAMIA CALIFORNICA.

BY A. R. GROTE.

Mr. Beutenmüller writes to me that, as to *Samia californica*, this name is the first published (1865) with description and must have preference for the species. Dr. Behr writes to Mr. Beutenmüller that the name "*ceanothi*" was by mistake left out of the original description, and that no such name as "*Samia rubra* Behr," to which specific title Neumoegen and Dyar give preference, was ever published by him. I stated in the "*Saturniiden*," that no description under the name "*rubra*" is known to me. The descriptions of the species under the name "*ceanothi*" (1868) and "*euryalus*" (1875) are both later than its description as *californica*; although the two first names were in use in collections, as it now appears, they were neither of them sanctioned by description at the time my original paper appeared.

NEW SPECIES OF INSECTS TAKEN ON A TRIP FROM THE MESILLA VALLEY TO THE SAC- RAMENTO MTS., NEW MEXICO.

BY T. D. A. COCKERELL.

From September 27 to October 7, 1896, the writer went on a trip to the Sacramento Mts., in company with Prof. C. H. T. Townsend. Among the insects obtained are several new species, some of which are described herewith:

COCCIDÆ.

Icerya (*Crypticerya*) *townsendi*, sp. nov.

♀. Long. 5, lat. 4, alt. 3.5 mm., subglobose, dark pink becoming dark purplish, thinly covered with white mealy secretion, which forms dorsal and sublateral

longitudinal series of wart-like white prominences. Viviparous (ovoviviparous), the young leaving the egg before being excluded from the body of the parent.

Legs and antennæ dark brown, the distal margins of the antennal joints broadly pallid. Antennæ 11-jointed, slender, joints 1, 2 and 11 subequal in length and longest, the others subequal and shorter, 3 about as long as broad; 4 and 5 shorter than 3 and broader than long, 5 shortest; 6 to 10 longer than broad. 3 may be as long as 2. Femur rather stout. Tibia longer than femur. Tarsus curved, about half as long as tibia. Claw pallid, broad, narrowing to a point. Mouth parts small.

Larva at period of hatching 1 mm. long, bright red, sparsely powdered with white meal, legs and antennæ black. Antennæ 6-jointed, 6 much longest; formula 6(21)·3(54). End of body with 6 long hairs on each side, of which the first three and last are about equal, and the other two very much longer. The two especially long ones are very close together.

Habitat: Mescalero Reservation, a short distance below the Agency, at base of stems of *Gutierrezia sarothra*, October 2. *Orthezia nigrocincta* Ckll., occurred in numbers on the same plants. On July 26, 1892, Prof. Townsend found a single specimen of *Icerya* on *Gutierrezia microcephala* about 10 miles south of Navajo Springs, Arizona. I did not see the specimen which was sent to Dr. Riley, but it was very possibly *I. townsendi*.

A few weeks ago Prof. Townsend discovered at Mesilla an *Icerya* on stems of *Pluchea borealis*, while collecting *Phenacoccus helianthi*, which abounds on the same plant. This is larger than *I. townsendi* (long. 6.5, lat. 5.5, alt. 5 mm.), dark purplish grey, speckled with white secretion, with very distinct longitudinal rows of yellow-white mealy protuberances. These wart-like protuberances number about 8 in the dorsal row; the sublateral row is anteriorly single, of three, then giving way to two rows, of about 6 each. There is also a lateral row of about 9. The legs and antennæ resemble those of *townsendi*. On breaking open the body, I found a quantity of orange-yellow fluid, in which the larvæ had not yet reached the hatching stage, and so could not be compared with those of *townsendi*. This *Icerya* on *Pluchea* I propose to call *I. townsendi* var. *pluchea*, as its characters scarcely warrant us in regarding it as a distant species. *I. townsendi* is closely allied to *I. rosæ*; and especially, it would seem, to *I. australis*, which Maskell regards as a variety of *rosæ*.

It may be remarked here that *Icerya (Proticerya) rileyi* Ckll., was found in abundance on mesquite a few miles south of Tularosa; a new locality.

Dactylopius dasyliirii, sp. nov.

♀. Length 4 mm. or slightly less, dark olivaceous, covered with white meal.

No lateral tufts, but sides very mealy; thick caudal tufts like those of *D. virgatus*, not very long. Antennæ very slender, 8-jointed. Formula 83(12)(456)7. All the joints longer than broad. 8 with three whorls of hairs. 3 very slender, nearly as long as 8. 1 longer than its breadth at base, 8 about or nearly as long as 6+7. Joints with sparse whorls of long hairs. Color of antennæ brown. Legs ordinary, small, slender, pale brown. Tarsus about half as long as tibia. Claw short, moderately curved. Tarsal digitules extremely slender, filiform, with minute knobs. Digitules of claw about as long as claw, stout, bulbous at base. Tibia with four strong bristles on outer margin. Caudal tubercles low, rounded, with a rather long bristle, some short bristles, and a couple of short stout spines. The ♀ does not stain the liquid in which it is boiled. Young larva light yellow.

Habitat: Organ, N. M., 5,100 ft., in great numbers at bases of leaves of *Dasylyrion wheeleri*. The larvæ live at the extreme base of the leaf, which is pallid; the adults a little further up. This is a typical *Dactylopius*, and quite different from *D. olivaceus* Ckll., which lives "in cavities in leaves" of *Yucca*.

***Dactylopius gutierrezia*, sp. nov.**

♀. Slate color, small (when boiled and flattened under cover-glass, long. 2, lat. 1 mm.), forming a long firm snow-white ovisac, 4 to 6 mm. long, about 1 mm. broad, on the narrow leaves of the *Gutierrezia*.

♀. Elongato-oval, does not stain the liquid in which it is boiled; antennæ and legs pale. Antennæ 8-jointed, of the usual Dactylopiine type. Formula 812(37)(46)5. 5 is broader than long. 3 is conspicuously shorter than 2. 1 is very large. 8 has three whorls of hairs. Anal ring with the usual 6 hairs. Caudal tubercles very low, with the usual hairs, the longest a little longer than those of the anal ring. Legs ordinary. Trochanter with a rather short bristle. Tibia almost as long as femur, tarsus rather more than half as long as tibia. Claw small, not much curved. Tarsal digitules filiform, without knobs. Digitules of claw stout, but very short, shorter than claw.

Habitat: Mesilla Valley between Las Cruces and Organ, abundant on *Gutierrezia sarothræ*, var. Also abundant on *G. sarothræ* near the Muscalero Agency, at the type-locality of *Icerya townsendi*. This is not a typical *Dactylopius*, but is allied to such forms as *D. townsendi* and *D. steelii*. Its ovisac is exactly like that of *Phenacoccus*. It has a chalcidid parasite.

***Ceroplastes irregularis* Ckll., var. *rubidus*, var. nov.**

♀. Scale very dark madder red or pinkish-brown, with the short dorsal line of secretion showing up conspicuously white. Margin of waxy scale dull white. Boiled in caustic soda, the liquid is turned claret color.

Habitat: Whitewater, abundant on *Atriplex canescens*. At this time (beginning of October) the scales were full of the pink eggs. The dark pink-brown wax of this insect is very peculiar, and was perfectly constant in the locality, the typical form not being observed anywhere in the vicinity.

CECIDOMYIIDÆ.

Cecidomyia neomexicana, sp. nov.*

♂. Length 3 mm. Dark slate grey. Sutures of abdominal segments reddish two longitudinal hairy bands on thorax; abdomen hairy. Halteres dull white. Antennæ 2+12 jointed, very dark grey, sometimes pale; legs grey, paler. Wings greyish, venation normal; vii (following Comstock's nomenclature) very weak; fold representing v distinct, iii 2+5 reaching margin a little above tip of wing; lower margin with a fringe of hairs. Antennal joints elongate, cylindrical, not moniliform with sparse whorls of short hairs; joint 3 much longer than 4. Pupa-shell red-brown.

Galls numerous, many together, on twigs of *Atriplex canescens*; globular, 8 to 12 mm. diam., yellowish-white. Composed of loose felted hairs, so that the outside is soft, wool-like in appearance, yielding to pressure. The cell within is green, not at all woody. Flies issued from September 30 to October 1.

Habitat: Organ, N. M., 5100 ft. Also common on Tularosa Creek. The fly resembles *C. atriplicis*, Twms., but the gall is quite different. Prof. Townsend has known the galls of *C. neomexicana* for several years, but had failed to obtain the fly.

APIDÆ.

Perdita townsendi, sp. nov.

♀. Length about 7.5 mm., shining, fairly pubescent. Head dark prussian green, area between clypeus and antennæ black. Vertex, occiput and cheeks with conspicuous white pubescence, sides or front also pubescent. Front minutely granular, with sparse small punctures. Clypeus, sparsely but distinctly punctured, moderately high, rounded at top, notched. Eyes very dark brown. Clypeus except the usual black dots, lateral face-marks, two spots representing supraclypeal marks, scape except a black streak at and above, and basal half of mandibles, primrose yellow. Lateral face-marks shaped almost exactly as in *P. rectangulata*, but separated from clypeus by a black line, and the narrowing about level with the lower part of the antennal sockets, the linear upward extension very short. Flagellum dark sepia brown above, yellow beneath. Thorax with moderately dense white pubescence, shining dark greenish-blue or bluish-green, the mesothorax more green, the metathorax more blue. Mesothorax smooth, sparsely punctured; metathorax minutely granular, or rather tessellate. Tubercles and hind border of prothorax narrowly, very pale yellow. Tegulæ hyaline with a yellow basal mark. Wings milky-hyaline. Stigma and nervures colorless. Marginal cell with the poststigmatel portion slightly the longer. Second submarginal large, narrowed about half to marginal. Third discoidal distinct. Legs primrose yellow; patch on anterior and middle tibiæ behind, and hind tibiæ except extreme base, black. Small joints of hind tarsi darkened. Abdomen broad and flat, very pale yellow, with continuous brown-black bands, occupying the adjacent apices and bases of segments, 1-2, 2-3, 3-4, and 4-5, the first two of these four bands being broader than the others. Segment 1 has also its base black, leaving only a rather narrow transverse

* Mr. Coquillett refers *C. neomexicana* to *Asphondylia*, where I suppose *C. atriplicis* should also go. T. D. A. C.

band of light yellow, broken in the middle. Venter very pale yellow without marks. The mandibles are notched within near the end.

♂. Length about 6.5 mm. The yellow color darker; flagellum orange beneath. Margin of stigma and adjacent nervures brownish, marginal cell therefore very distinct. 3d discoidal excessively weak. Face all yellow beneath level of antennæ, except clypeal dots, and small triangles at junction of clypeus, supraclypeal mark, and dog-ear marks. Supraclypeal mark slightly notched or depressed in median line above, not at all produced upwards. Lateral marks running obliquely from antennal sockets to a point on the margin of the eye, forming an angle of about 45° thereat. Mandibles yellow except tips. Labrum yellow with a dark spot on upper border medially. Prothorax yellow with a dark transverse band. Legs wholly yellow, except a dark stripe on hind tibiæ, and dark last three joints of hind tarsi. Abdomen with five bands instead of four, some presenting square sublateral bulgings on anterior edge, not always obvious.

Habitat: White Sands by Whitewater, N. M. Many of both sexes found by Prof. Townsend visiting flowers of *Bigelovia*, October 6th. On the same day we found a purple-flowered *Aster* at Whitewater visited by *P. townsendi*, 1 ♂, 1 ♀, one *P. fullax*, Ckll., and one *P. semicrocca*, Ckll. The ♂ *townsendi* from the *Aster* has the abdomen more darkened, so that it might be said to be black with light bands.

P. townsendi is allied to *P. bigeloviae*, but very distinct. The ♀ is larger, and the femora are entirely yellow, etc. In my table of *Perdita* (Proc. Phil. Acad., 1896) it runs down to 77. The ♂ in the table runs down to 42. ♂ *bigeloviae* differs at once from it by the yellow of the face extending above level of antennæ in the median line.

***Perdita stottleri*, sp. nov.**

♀. About 6 mm. long. Differs from *townsendi* in its small size, and in having the front femora with a large black patch behind, the middle femora with a black speck near the end, and the hind femora with the upper hind edge broadly black for the apical three-fifths. The clypeus is hardly so high as in *townsendi*, and the lateral face-marks run gradually to a point, the angulation being barely perceptible. The supraclypeal spots are present as in *townsendi*.

Differs at once from *bigeloviae* by the pale yellow venter of abdomen, as in *townsendi*, that of *bigeloviae* being dark brown. The abdomen above also is marked just as in *townsendi*. The femora in *bigeloviae* are all black except at their distal ends, in *stottleri* only marked with black, in *townsendi* without any black.

Habitat: By Tularosa Creek at the store on the edge of the Mesquero Reservation, October 1st. One specimen on flowers of *Bigelovia graveolens* var. *glabrata*,* a few feet within the boundary-line of the

* The *Bigelovia graveolens* var., along Tularosa Creek is very attractive to flies. Prof. Townsend will report elsewhere on those of the families in which he is inter

reservation. The species is named after Lieut. Stottler, the Indian Agent, whose work among the Mescalero Apaches excited our strongest admiration. *P. stottleri* is very near to *townsendi* (which occurs on a different *Bigelovia*), but six ♀ *townsendi* were compared with it, and none show any tendency to intergrade.

***Perdita chrysochila*, sp. nov.**

♂. Length 5.5 mm. Head and thorax very dark bluish green, scutellum and clypeus black, supraclypeal area æneous. Abdomen piceous-brown above and below, the hind margins of the segments rather broadly hyaline; apex orange. Labrum dark brown. Mandibles black with the tips dark rufous. Scape black, flagellum very dark brown. Tegule pale brown. Wings milky-hyaline; costal nervure, margin of stigma, and radial nervure sepia-brown; the other nervures pallid. Pubescence dull white. Legs piceous black, the tarsi becoming brown.

Head very large, subquadrate; cheeks unarmed, shining, not very pubescent. Front shining, microscopically tessellate, with distinct but very sparse punctures. Face tolerably hairy. Thorax shining, tolerably hairy. Mesothorax and scutellum with distinct but very sparse punctures. Metathorax shining, very obscurely sculptured. Marginal cell with its poststigmatal portion much the longest; its end squarely truncate. Second submarginal narrowed more than half to marginal. Third discoidal excessively weak or wanting.

Habitat: Organ, N. M., 5100 ft., September 28th, on flowers of *Verbesina encelioides*, one taken others seen. Near to *P. arcuata* Fox, to which it runs in table of *Perdita*, but it does not have the pale color on mandibles and anterior tibiae.

Two other species of *Perdita* were taken on the trip, namely: *P. albobittata*, Ckll., Parker's Well, October 7th. Three ♀ ♀ visiting flowers of *Baileya multiradiata*.

P. sphaeralcea Ckll. Whitewater, October 6th, one ♀ on *Sphaeralcea angustifolia*. Organ, September 28th, three ♀ ♀ at flowers of *Mentzelia*, with no *Sphaeralcea* near. The occurrence of this species on *Mentzelia* is contrary to all previous experience, and surprised me much.

I will take this opportunity of stating that the flowers visited by *P. callicerata* and *P. solitaria* have now been examined with care; the former visits *Baileya multiradiata* at Las Cruces, the latter *Pectis papposa* in Soledad Cañon.

ested, but I may as well give a list of determinations just received from Mr. Coquillett through Mr. L. O. Howard. (1) On the *Bigelovia* at store below Agency, with *Perdita stottleri*: *Exoprosopa* sp., *Phorbia* sp. (2) On the *Bigelovia* at camp just below Agency, Oct. 2: *Sparnopolius fulvus* Wied., *Phthiria diversa* Coq., *Lordotus diversus* Coq., *Exoprosopa caliptera* Say, *Anthrax syrtis* Coq., *Odontomyia nigrirostris* Loew, *Pegomyia communis* Walk., *Safronyza vulgaris* Fitch, and *Sarcophaga* sp. Mr. Linell has also identified an *Ecanthus*, which was rather common on the *Bigelovia* just below the Agency, October 2d, as *E. fasciatus*. T. D. A. C.

ALEURODIDÆ.

Aleurodes berbericola sp. nov.

Empty pupa-case .75 mm long, oval, colorless, without a fringe, margin radiately striate; vasiform orifice an elongated triangle, the base cephalad, the sides nearly twice as long as the base; operculum hemispherical or semilunar, its base being concave; lingua elongate subspatulate, extending nearly as far beyond the operculum as the breadth of the latter, but not to the tip of the orifice. No conspicuous submarginal orifices.

Adult ♀ .60 mm. long, anterior wing 1.25 mm. Head and body entirely deep orange yellow, legs pale lemon yellow, wings pure white without marks. Eyes jet black, each one completely divided. Genitalia ordinary, the usual two bristles on each side of the end of the abdomen.

Habitat: On a shrubby *Berberis*, the pupæ on the leaves, the adults flying about the plants. Mescalero Reservation, Tularosa Creek, below the Agency, October 2d.

This is surely a distinct species, though the adult is much like several others. The vasiform orifice, etc., present some similarity to those of the larva of *A. decipiens* Maskell, but in other respects there is no resemblance between the species.

PROCEEDINGS OF THE NEW YORK ENTOMOLOGICAL SOCIETY.

MEETING ON MARCH 17, 1896.

Held at the American Museum of Natural History.

President Zabriskie in the chair. Eleven members present.

Mr. Birnbaum read a paper on Phosphorescent Insects and Plants, illustrated by insects and figures. Discussion by Messrs. Dyar, Loos, Beutenmüller and Zabriskie. Mr. Beutenmüller exhibited some branches from the United States of Colombia with the borings of a large carpenter bee with live larva and imago, the tunnels being about an inch in diameter.

MEETING OF APRIL 7, 1896.

Held at the American Museum of Natural History.

President Zabriskie in the chair. Eleven members present.

Dr. Love spoke on the larva of the Bot-fly.

Dr. Lagai exhibited some entomological preparations, preserved in formaline, which included some interesting life-histories of insects. After discussion the meeting adjourned.